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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/600,588

06/19/2003

Chihiro Izumi

02196-0292US1

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12/01/2006

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EXAMINER

IP, SIKYIN

ART UNIT

PAPER NUMBER

1742

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/600,588

Applicant(s)

IZUMI ET AL.

Examiner

Sikyin Ip

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-7 is/are pending in the application.
- 4a) Of the above claim(s) 4-7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-2 are, drawn to a titanium copper alloy, classified in class 148, subclass 432+.
- II. Claims 4-7 are, drawn to a method of manufacturing the titanium copper alloy, classified in class 148, subclass 682+.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the process as claimed can be used to make other and materially different product such as aluminum alloys.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

Applicant's election with traverse of Group I in the reply filed on September 13, 2006 is acknowledged. The traversal is on the ground(s) that instant method is limited

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to Ti-Cu alloys. This is not found persuasive because instant recited processing steps can be used for producing many different alloys such as aluminum alloys.

The requirement is still deemed proper and is therefore made FINAL.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2 of copending Application No. 10/800,025. Although the conflicting claims are not identical, they are not patentably distinct from each other because the area percentage of Cu-Ti intermetallic compound phase, alloy composition, and tensile properties are overlapped.

Claims 1-2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 of copending Application No. 11/140,425. Although the conflicting claims are not identical, they are not patentably distinct from each other because the area percentage of Cu-Ti intermetallic compound phase, alloy composition, and tensile properties are overlapped.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicants' statement with respect to obviousness-type double patenting rejection is noted. But, said statement fails to provide a reason why obviousness-type double patenting rejection should not be made.

Claim Rejections - 35 USC § 103

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claim 1 is rejected under 35 U.S.C. § 103 as being unpatentable over JP2001-303158 (PTO-1449).

JP 2001-303158 discloses Cu-Ti composition (Table 1), average grain size (page 3, [0006]), and tensile strength (page 3, [0006] and Table 3) except for the average number of intermetallic compound particles. But, the recited average number of intermetallic compound particles 700 or less per a cross-sectional area of $1000 \mu\text{m}^2$ in claim 1 reads on no intermetallic compound particle. Therefore, intermetallic compound particle needs not be disclosed by cited reference. As stated in *In re Peterson*, 315 F.3d 1325, 1329-30, 65 USPQ2d 1379, 1382 (Fed. Cir. 2003), that “A prima facie case of obviousness typically exists when the ranges of a claimed composition overlap the ranges disclosed in the prior art”. Therefore, it would have been obvious to one of ordinary skill in the art to select any portion of range, including the claimed range, from the broader range disclosed in a prior art reference because the prior art reference finds that the prior art composition in the entire disclosed range has a suitable utility. Also see MPEP § 2131.03 and § 2123.

Claims 1-2 are rejected under 35 U.S.C. § 103 as being unpatentable over JP 04231447 in view of JP 2001-303158 (PTO-1449) and further teaching of JP 61-124544.

JP 04231447 discloses Cu-Ti composition, grain size, and intermetallic precipitates size (translated copy, page 5, [0004]) and tensile properties (Table II) except for the kind of intermetallic precipitates and their density/area %. However, JP

04231447 discloses Ti and Cu as essential elements so intermetallic precipitates would be formed from said essential elements. Nonetheless, JP 2001-303158 discloses Cu₃Ti phase would form during age-hardening (page 2 [0002]). JP 61-124544 discloses area % and sizes (from 1 μm to over 10 μm) of intermetallic compound in Ti containing Cu alloy (Table 1, especially alloy O). As are evinced by cited references that the recited properties are merely conventional properties that inherently possessed by the conventional alloy composition and steps of age-hardening.

Response to Arguments

Applicant's arguments filed September 13, 2006 have been fully considered but they are not persuasive.

Applicants argue that

The present invention is characterized over Yamamoto by homogeneously dispersed fine Cu/Ti intermetallic compound particles, specifically, by 700 or less particles per 1000 μm^2 having a diameter from 0.2 to 3.0 μm , and an average grain size of the alloy of 8 μm or less. This combination of features, which is not taught or suggested by Yamamoto, gives an “ alloy with excellent strength and bendability that is not taught or suggested by Yamamoto. ”

First, Yamamoto in [0006] discloses grain size 0.005mm (5 μm) which overlaps the claimed 8 μm or less. Second, as agreed by applicants that the claimed intermetallic compound particles density having diameter from 0.2 to 3 μm include zero (claimed range of 0 to 700 particles per 1000 μm^2 is narrow. , page 6, line 4 of instant remarks). Therefore, said intermetallic compound particles and their density need not be disclosed by Yamamoto.

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Applicants' argument with respect to Yamamoto's processing steps is noted.

But, applicants fail to substantiate their position by factual evidence. Moreover, recited intermetallic compound particles are excluded from claimed Ti-Cu alloy. Thus, cited reference needs not to disclose excluded intermetallic compound particles.

Applicants' argument with respect to Toe as below is noted :

“ In fact, however, Toe neither discloses nor suggests any limitation on the number of intermetallic compound particles having diameters of 0.2 to 3 μm . Nor does Toe disclose or suggest an alloy having an average grain size of 8 μm or less.” First, number of intermetallic compound particles (particles density) is taught by Senda not Toe. Second, Toe in abstract disclose grain size less than 20 μm and precipitates size less than 2 μm

PI JP 04231447 A2 19920820 JP 1990-417778 19901227
 PRAI JP 1990-417778 19901227
 AB The alloy contains 0.1-5% Ti, <20 ppm O, and optionally 0.001-5% Sn, Mg, Mn, Al, B, P, As, and/or S. The Cu alloy contains grains <20 μm and ppts. (formed during heat treatment) <2 μm in size and shows high resistance to migration.

grain size

precipitate size

Applicants argue that the alloy of Senda contains Zn and Al elements. But, in transitional expression “comprising” does not exclude any unrecited ingredients even in major amounts. Moreover, alloy of Senda is Cu based alloy comprises Ti as claimed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The above rejection relies on the reference(s) for all the teachings expressed in the text(s) of the references and/or one of ordinary skill in the metallurgical art would have reasonably understood or implied from the text(s) of the reference(s). To emphasize certain aspect(s) of the prior art, only specific portion(s) of the text(s) have been pointed out. Each reference as a whole should be reviewed in responding to the rejection, since other sections of the same reference and/or various combination of the cited references may be relied on in future rejection(s) in view of amendment(s).

All recited limitations in the instant claims have been met by the rejections as set forth above.

Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121; 37 C.F.R. Part §41.37 (c)(1)(v); MPEP §714.02; and MPEP §2411.01(B).

Examiner Correspondence


Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (571)-272-1244.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


SIKYIN IP
PRIMARY EXAMINER
ART UNIT 1742

S. Ip
November 27, 2006